



**Figure S2.** OprD types among the carbapenemase non-producing strains. Three main OprD types and 11 other sub-types were observed. The point mutation pattern is described below, note that sub-types *I.a*, *I.a2*, and *I.a3* additionally carried the  $_{372}(\text{VDSSSS-YAGL})_{383}$  indel in the C-terminal part of OprD, firstly described by Epp, *et al.* [40].

- *I.a* (S<sub>57</sub>E, S<sub>59</sub>R, V<sub>127</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, E<sub>202</sub>Q, I<sub>210</sub>A, E<sub>230</sub>K, S<sub>240</sub>T, N<sub>262</sub>T, T<sub>276</sub>A, A<sub>281</sub>G, K<sub>296</sub>Q, Q<sub>301</sub>E, R<sub>310</sub>E, A<sub>315</sub>G, L<sub>347</sub>M, S<sub>403</sub>A, Q<sub>424</sub>E);
- *I.a2* (V<sub>127</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, E<sub>202</sub>Q, I<sub>210</sub>A, E<sub>230</sub>K, S<sub>240</sub>T, N<sub>262</sub>T, T<sub>276</sub>A, A<sub>281</sub>G, K<sub>296</sub>Q, Q<sub>301</sub>E, R<sub>310</sub>E, A<sub>315</sub>G, L<sub>347</sub>M, S<sub>403</sub>A, Q<sub>424</sub>E);
- *I.a3* (S<sub>57</sub>E, S<sub>59</sub>R, V<sub>127</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, E<sub>202</sub>Q, I<sub>210</sub>A, E<sub>230</sub>K, S<sub>240</sub>T, N<sub>262</sub>T, T<sub>276</sub>A, A<sub>281</sub>G, K<sub>296</sub>Q, Q<sub>301</sub>E, R<sub>310</sub>E, A<sub>315</sub>G, **V<sub>352</sub>L**, S<sub>403</sub>A, Q<sub>424</sub>E).
- *I.b* (D<sub>43</sub>N, S<sub>57</sub>E, S<sub>59</sub>R, V<sub>127</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, E<sub>202</sub>Q, I<sub>210</sub>A, E<sub>230</sub>K, S<sub>240</sub>T, N<sub>262</sub>T, **A<sub>267</sub>S**, A<sub>281</sub>G, K<sub>296</sub>Q, Q<sub>301</sub>E, R<sub>310</sub>G, **V<sub>359</sub>L**);
- *I.c* (S<sub>57</sub>E, S<sub>59</sub>R, V<sub>127</sub>L);
- *II.a* T<sub>103</sub>S, K<sub>115</sub>T, F<sub>170</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, R<sub>310</sub>E, A<sub>315</sub>G, G<sub>425</sub>A
- *II.a2* T<sub>103</sub>S, K<sub>115</sub>T, F<sub>170</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, R<sub>310</sub>E, G<sub>425</sub>A
- *II.a3* T<sub>103</sub>S, K<sub>115</sub>T, F<sub>170</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, R<sub>310</sub>E, A<sub>315</sub>G, **C<sub>420</sub>R**

- *II.a4* T<sub>103</sub>S, K<sub>115</sub>T, F<sub>170</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, R<sub>310</sub>E, A<sub>315</sub>G
- *II.b* T<sub>103</sub>S, K<sub>115</sub>T, F<sub>170</sub>L
- *II.b2* D<sub>43</sub>N, T<sub>103</sub>S, K<sub>115</sub>T, F<sub>170</sub>L
- *II.c* T<sub>103</sub>S, K<sub>115</sub>T, F<sub>170</sub>L, E<sub>185</sub>Q, P<sub>186</sub>G, V<sub>189</sub>T, R<sub>310</sub>E, A<sub>315</sub>G, Y<sub>350</sub>STOP
- *III* W<sub>417</sub>STOP